



## FLIRT H<sub>2</sub>

SBCTA, San Bernardino County  
Transportation Authority, USA

The FLIRT H<sub>2</sub> is a two car Regional Train with Hydrogen PowerPack for San Bernardino County Transportation Authority. It is based on the existing FLIRT Diesel Multiple Unit (DMU) for SBCTA. Many components and subsystems are identical.

The Hydrogen Train for the SBCTA is the first vehicle in the new FLIRT H<sub>2</sub> product family. At the same time the FLIRT H<sub>2</sub> will be the first Hydrogen Train in the US. The project is supported by the State of California. The new train will be operated on the 9-mile route from San Bernardino to Redlands University and will perform up to 16 trips per day. This means that the vehicle will have a total daily mileage range of 300 up to 380 miles (480 km up to 600 km).

Being a member of the FLIRT family, the FLIRT H<sub>2</sub> has the same modular drive technology: The Multiple Unit is equipped with a scalable PowerPack, that is using modular fuel cells, hydrogen tanks and batteries (on top of the end car) that can be tailored to the requirements of different operation schemes. The FLIRT H<sub>2</sub> with its scalable PowerPack is able to drive in train constellations from two up to four cars. Of course, the FLIRT H<sub>2</sub> is also available with a pantograph, to be operated in the most energy efficient electric mode, under the wire and to save hydrogen.

### Stadler Rail Group

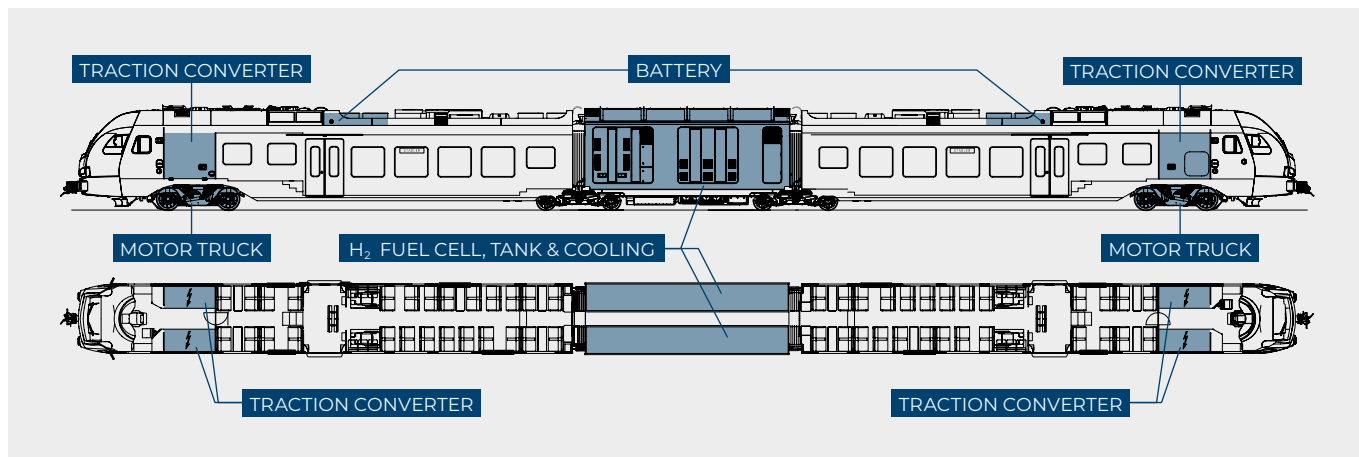
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## Technical features

### Technology

- Emission-free driving with hydrogen
- Emission-free driving in electric mode (optional)
- Suited for Californian Climate
- LTO Batteries for high recuperation
- Sealed modular H2- storage in the PowerPack
- Lightweight Aluminium Carbody

### Comfort

- Powerful, redundant air-conditioning layout
- Comfortable seats with tables
- Designed to be accessible to disabled and ADA compliant passenger compartment people
- Wide doorways
- Level entry, low floor

### Safety

- Crash design according to FRA and EN standards
- Fire-protection and -detection systems
- Passenger Information and Communication systems
- Hydrogen storage completely separated from passenger area

## Technical data

<b>Customer</b>	San Bernardino County Transportation Authority, California, USA	
<b>Operation</b>	California, USA	
<b>Gauge</b>	1435 mm (4'-8.5")	
<b>Designation</b>	FLIRT H <sub>2</sub>	
<b>Wheel arrangement</b>	Bo'2'2'Bo' (B-2-2-B)	
<b>Number of vehicles</b>	1	
<b>Commissioning</b>	2024	
<b>Seats</b>	116	
<b>Folding seats</b>	12	
<b>Standing capacity 4/m<sup>2</sup></b>	120	
<b>Floor height</b>	Low Floor	610 mm (24.02")
	High Floor	1,210 mm (47.64")
<b>Door width</b>	1,300 mm (4'-3.18")	
<b>Longitudinal strength</b>	1,500 kN (337.000 lbs)	
<b>Length over coupler</b>	51,500 mm (168'-11.54")	
<b>Width</b>	2,980 mm (9'-9.32")	
<b>Height</b>	4,312 mm (14'-1.77")	
<b>Wheel base</b>	Motor bogie	2,500 mm (98.43")
	Trailer bogie	2,700 mm (106.3")
<b>Max. dynamic brake</b>	1450 kW	
<b>Max. power</b>	700 kW	
<b>Tractive effort</b>	160 kN (36.000 lbs)	
<b>Max. Speed</b>	127 km/h (79 mph)	
<b>Range</b>	460 km (> 286 miles)	
<b>Max axle load</b>	20 t (44.000 lbs)	